Abstract

A method for rapidly analyzing data gathered during scatterometry and related methods uses a combination of database lookup, database interpolation and theoretical model evaluation. Database lookup is used to provide an initial mapping between a

5 measured optical response and a set of associated measurement parameters. Interpolation is then used to refine the optical response and parameters beyond the accuracy provided by the database. A theoretical model is then repeatedly evaluated to refine the optical response and parameters beyond the accuracy provided by interpolation. In this way, the present invention avoids the inaccuracies associated with traditional interpolation-based

10 analysis and without incurring the computational complexity associated with real-time database supplementation.